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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,987	10/31/2003	Graham Turnbull	1-24881	8844
4859	7590	12/02/2005	EXAMINER	
MACMILLAN SOBANSKI & TODD, LLC ONE MARITIME PLAZA FOURTH FLOOR 720 WATER STREET TOLEDO, OH 43604-1619			MANCHO, RONNIE M	
			ART UNIT	PAPER NUMBER
			3663	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/698,987

Applicant(s)

TURNBULL, GRAHAM

Examiner

Ronnie Mancho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I and species A (figs. 2A & 2B) drawn to claims 1-5, and 7-11 in the reply filed on 9/8/05 is acknowledged.

2. Claims 6 and 12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 9-08-05.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5, and 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. In claim 1, the applicant cites "wherein the *voltage* and *frequency* of the oscillating digital electronic signal transmitted through the antenna *is* controlled by the micro-processor".

There is no subject-verb agreement in the limitation.

In claim 2, "the radio frequency" lacks antecedent basis.

In claim 5, the applicant cites "the antenna is an element of an object to which it is attached" is not clear. The statements portrays that the antenna and the object are different since "to which it is attached" implies that the antenna is attached to the object. Therefore, the antenna must be a different entity compared to the object.

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The rest of the claims are rejected for depending on a rejected base claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Viana et al (6873250) in view of McClanahan et al (6130607).

Regarding claim 1, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose an apparatus for detecting obstacles comprising:

an antenna 14;

a signal processing circuit 28 including a microprocessor;

a computer program (col. 4, lines 34-41);

a transceiver 20 transmitting an oscillating digital electronic signal to the antenna and generating a feedback signal 24 of the electronic signal passing through the antenna 14, the transmitted electronic signal generating an electromagnetic field around the antenna 14, wherein the signal processing circuit 28 has as an input the antenna feedback signal (from 24 to 30) generated by the transceiver 20, and wherein the voltage and frequency of the oscillating digital electronic signal transmitted through the antenna 14 is controlled by the micro-processor 28 according to the computer program, and wherein, when an obstacle enters the generated electromagnetic field around the antenna, the antenna feedback signal changes, the change being

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detected by the signal processing circuit 28, and wherein a signaling means generates an output signal upon detection by the signal processing circuit of a change in the electronic signal passing through the antenna (col. 5, lines 42-58; col. 8, lines 10+).

Viana disclosed the antenna, but did not particularly disclose its detail structure to include a single electrically conductive element. However McClanahan et al (figs. 4 and 5; col. 6, lines 53+) disclose an apparatus for detecting obstacles comprising an antenna 12 *including* a single electrically conductive element 150.

Therefore, it would have been obvious to one of ordinary skill in the art of obstacle detection to modify the Viana device as taught by McClanahan et al (col. 2, lines 30-34; col. 6, lines 64+) for the purpose of virtually eliminating false detections.

Regarding claim 2, Viana et al disclose the apparatus according to claim 1 wherein the digital electronic signal oscillates in the radio frequency.

Regarding claim 3, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 1 wherein the voltage of the oscillating digital electronic signal is adjustable (see VCO), and wherein adjustment of said voltage adjusts the region in which obstacles can be detected.

Regarding claim 4, McClanahan et al (col. 2, lines 30-34; col. 6, lines 64+) disclose apparatus according to claim 1 wherein the antenna is a single electrically conductive element surrounded by an insulating layer of material 146.

Regarding claim 5, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 1 wherein the antenna is an element of an object to which it is attached (figs. 7, 9, 10-12).

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Regarding claim 7, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 1 wherein the output signal varies according to the magnitude of change in voltage of the electronic signal passing through the antenna, and wherein the variation in output signal is controlled by the microprocessor in accordance with the computer program.

Regarding claim 8, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 7 wherein the computer program provides a number of discrete output signals, and wherein change from one output signal to another output signal is determined by the monitored voltage in the antenna.

Regarding claim 9, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 1 wherein the apparatus includes an alarm device, and the output signal is received by the alarm device, the alarm device generating an alarm signal upon receipt of said output signal.

Regarding claim 10, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 9 wherein the alarm output is an acoustic alarm.

Regarding claim 11, Viana et al (figs. 1, 2, 4, 7, 9, 10-12; cols. 5-15) disclose the apparatus according to claim 1 wherein the digital electronic signal is transmitted at 143 KHz (see McClanahan, col. 8, lines 25-28) and 0.25 Volts.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571/272/6984. The examiner can normally be reached on Mon-Thurs: 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronnie Mancho  
Examiner  
Art Unit 3663

11/25/05

  
JACK KEITH  
SUPERVISORY PATENT EXAMINER